

REMARKS

Claims 1-16 and 29-54 were previously withdrawn. Claims 17, 19, 28, 55, and 64 were amended. Support for the amended claims may be found at least at lines 1-3 on page 9 on the Patent Application. No new matter has been added. Claims 17-28 and 55-69 are pending in the present application.

In the Office Action, claims 17, 19-20, 24-25, 27, 55-56, 59, 61, 64-65, and 69 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Koinuma, et al (U.S. Patent No. 5,569,502). Claims 18, 26, 28, 57, 60, and 63 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Koinuma in view of Reeder (U.S. Patent No. 4,070,638). The Examiner's rejections are respectfully traversed.

Koinuma describes introducing a monosilane product gas into a film deposition chamber and then applying a high voltage to the gas to form an amorphous silicon film on a surface of a substrate. See Koinuma, col. 5, ll. 12-25. Koinuma also describes applying ultrasonic vibrations to the substrate to accelerate the deposition of the film on the substrate. See Koinuma, col. 3, ll. 41-46. In contrast, the present invention includes providing a surface acoustic wave to at least one interior surface in a chamber, the surface acoustic wave having a frequency range selected to reduce adsorption of a first precursor gas onto the at least one interior surface, as set forth in independent claims 17 and 55. Thus, Applicants respectfully submit that the present invention is not anticipated by Koinuma and request that the Examiner's rejections of claims 17, 19-20, 24-25, 27, 55-56, 59, 61, 64-65, and 69 under 35 U.S.C. § 102(b) be withdrawn.

Applicants also respectfully submit that the present invention is not obvious in view of the cited references. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490

F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). As discussed above, Koinuma fails to teach or suggest providing a surface acoustic wave to at least one interior surface in a chamber, the surface acoustic wave having a frequency range selected to reduce adsorption of a first precursor gas onto the at least one interior surface, as set forth in independent claims 17 and 55. The Examiner relies on Reeder to teach providing first and second AC voltages. However, Reeder does not remedy the aforementioned fundamental deficiency of the primary reference.

Moreover, Koinuma appears to teach away from the present invention by teaching that ultrasonic vibrations are applied to the substrate to accelerate the deposition of the film on the substrate. It is by now well established that teaching away by the prior art constitutes *prima facie* evidence that the claimed invention is not obvious. *See, inter alia, In re Fine*, 5 U.S.P.Q.2d (BNA) 1596, 1599 (Fed. Cir. 1988); *In re Nielson*, 2 U.S.P.Q.2d (BNA) 1525, 1528 (Fed. Cir. 1987); *In re Hedges*, 228 U.S.P.Q. (BNA) 685, 687 (Fed. Cir. 1986).

For at least these reasons, Applicants respectfully submit that the present invention is not obvious over the cited references, either alone or in combination, and request that the Examiner's rejections of claims 18, 26, 28, 57, 60, and 63 under 35 U.S.C. § 103(a) be withdrawn.

The Examiner has indicated that claims 21-23, 58, 62, and 66-68 contain allowable subject matter. In view of the above arguments, Applicants believe that these claims are in condition for allowance. The Examiner has also provided a statement of reasons for the indication of allowable subject matter. Applicants note that not all of these statements apply to all of the allowable claims.

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. The Examiner is invited to contact the

undersigned at (713) 934-4060 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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